

REMARKS

Claims 1-11 are pending in this application, claims 1, 4, 8, and 10 being independent claims. In this Preliminary Amendment, Applicant has amended claims 1, 4, 8, and 10.

Entry of the above amendments is earnestly solicited. An early and favorable first action on the merits is earnestly solicited.


Attached hereto is a marked-up version of the changes made to the application by this Amendment.

Should there be any outstanding matters which need to be resolved in the present application, we respectfully request the Examiner to contact the undersigned at (703) 205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version With Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Twice Amended) An image display apparatus comprising:

an imaging section [having photoelectric conversion devices arranged in the form of a matrix, said imaging section sequentially outputting signals generated by said photoelectric conversion devices] which converts an optical image to signal charges,

said imaging section including:

photoelectronic conversion devices arranged in the form of a matrix,

vertical transfer paths arranged adjacent to the respective columns of said photoelectronic conversion devices, each of said vertical transfer paths transfers signal charges toward a lower end in accordance with vertical driving pulses supplied from the outside,

transfer gates for transferring signal charges generated by said photoelectronic conversion devices to the respective vertical transfer paths in accordance with field shift pulses supplied from the outside respectively, and

output circuits for converting signal charges arrived at the lower ends of said vertical transfer paths to signals and outputting the signals in parallel column by column of said matrix; and

a display section [having display devices arranged in the form of a matrix, which displays an image represented by signals applied thereto at the time of application of driving pulses, said display section applying the signals output in parallel from said imaging

section to said display devices column by column and supplying said driving pulses line by line] which displays an image.

said display section including:

display devices arranged in the form of a matrix, each of said display devices has a signal input terminal and a control signal input terminal, and displays an image represented by signals applied to the signal input terminal thereto at the time of application of driving pulses to the control signal input terminal.

input circuits for receiving signals output from said imaging section in parallel column by column and outputting signals corresponding the received signals to the signal input terminals of said display devices via signal buses in parallel column by column of said matrix, and

a vertical driving circuit for outputting the driving pulses to the control signal input terminals of said display devices via control buses line by line of said matrix in a predetermined order.

4. (Twice Amended) An image display apparatus comprising:

an imaging section [having photoelectric conversion devices arranged in the form of a matrix, said imaging section sequentially outputting signals generated by said photoelectric conversion devices] which converts an optical image to signal charges.

said imaging section including:

photoelectronic conversion devices arranged in the form of a matrix,

vertical transfer paths arranged adjacent to the respective columns of said photoelectronic conversion devices, each of said vertical transfer paths transfers signal

charges toward a lower end in accordance with vertical driving pulses supplied from the outside,

transfer gates for transferring signal charges generated by said photoelectronic conversion devices to the respective vertical transfer paths in accordance with field shift pulses supplied from the outside respectively, and

output circuits for converting signal charges arrived at the lower ends of said vertical transfer paths to signals and outputting the signals in parallel column by column of said matrix;

a signal conversion section for performing a processing for the signals output from said imaging section in parallel column by column and outputting the processed signals in parallel; and

a display section [having display devices arranged in the form of a matrix, which displays an image represented by signals applied thereto at the time of application of driving pulses, said display section applying the signals output in parallel from said signal conversion section to said display devices column by column and supplying said driving line by line] which displays an image,

said display section including:

display devices arranged in the form of a matrix, each of said display devices has a signal input terminal and a control signal input terminal, and displays an image represented by signals applied to the signal input terminal thereto at the time of application of driving pulses to the control signal input terminal,

input circuits for receiving signals output from said signal conversion section in parallel and outputting signals corresponding the received signals to the signal input

terminals of said display devices via signal buses in parallel column by column of said matrix, and

a vertical driving circuit for outputting the driving pulses to the control signal input terminals of said display devices via control buses line by line of said matrix in a predetermined order.

8. (Twice Amended) An image display apparatus comprising:

an imaging section [having photoelectric conversion devices arranged in the form of a matrix, said imaging section sequentially outputting signals generated by said photoelectric conversion devices] which converts an optical image to signal charges,

said imaging section including:

photoelectronic conversion devices arranged in the form of a matrix,

vertical transfer paths arranged adjacent to the respective columns of said photoelectronic conversion devices, each of said vertical transfer paths transfers signal charges toward a lower end in accordance with vertical driving pulses supplied from the outside,

transfer gates for transferring signal charges generated by said photoelectronic conversion devices to the respective vertical transfer paths in accordance with field shift pulses supplied from the outside respectively, and

output circuits for converting signal charges arrived at the lower ends of said vertical transfer paths to signals and outputting the signals in parallel column by column of said matrix;

a signal conversion section for performing a processing for the signals output in parallel from said imaging section column by column and outputting the processed signals in parallel; and

a parallel-to-serial conversion section for converting the signals output in parallel from said signal conversion section to serial signals.

10. (Twice Amended) A display apparatus comprising:

a serial-to-parallel conversion section for converting signals serially input thereto to parallel signals and outputting the signals;

a signal conversion section for performing a processing for the signals output in parallel from said serial-to-parallel conversion section column by column and outputting the processed signals in parallel; and

a display section [having display devices arranged in the form of a matrix, which displays an image represented by signals applied thereto at the time of application of driving pulses, said display section applying the signals output in parallel from said signal conversion section to said display devices column by column and supplying said driving pulses line by line] which displays an image.

said display section including:

display devices arranged in the form of a matrix, each of said display devices has a signal input terminal and a control signal input terminal, and displays an image represented by signals applied to the signal input terminal thereto at the time of application of driving pulses to the control signal input terminal.

input circuits for receiving signals output from said signal conversion section in parallel and outputting signals corresponding the received signals to the signal input terminals of said display devices via signal buses in parallel column by column of said matrix, and

a vertical driving circuit for outputting the driving pulses to the control signal input terminals of said display devices via control buses line by line of said matrix in a predetermined order.